

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Comtech Mobile Datacom Corporation)	File Nos. SES-MFS-20070530-00731
)	SES-AMD-20070731-01010
)	SES-AMD-20070907-01251
Application for Modification of Blanket Earth)	Call Sign: E990143
Station Authorization)	

ORDER AND AUTHORIZATION

Adopted: May 14, 2009

Released: May 15, 2009

By the Acting Chief, International Bureau, and the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. In this Order, we grant Comtech Mobile Datacom Corporation's (Comtech) application¹ to modify its existing mobile satellite service (MSS) authorization to operate 25,000 mobile earth terminals (METs): by adding authority to operate on the lower L-band frequencies and some additional upper L-band frequencies² to communicate with its existing point of communication, the MSAT-1 satellite;³ by authorizing the MSAT-2 satellite⁴ as a new point of communication using both upper and lower L-bands; and by authorizing new types of terminals. We also grant Comtech temporary waivers concerning Footnotes US308 and US315 to the United States Table of Frequency Allocations (Table of Allocations) and Section 25.136(d) of the Commission's rules.⁵ These waivers are limited to the current term of Comtech's authorization and will expire on January 18, 2011. Grant of this modification and accompanying waivers will permit Comtech to continue to provide MSS to its customers.

II. BACKGROUND

2. Comtech is currently authorized to operate up to 25,000 half-duplex⁶ MSS METs in the 1545-1558.5 and 1646.5-1660 MHz portions of the upper L-band, using MSAT-1.⁷ On May 30, 2007, Comtech filed its request for modification of license.⁸ In its application, Comtech seeks authority to

¹ Comtech Application for Modification of Satellite Earth Station, IBFS File No. SES-MFS-20070530-00731 (Comtech Application), as amended by File Nos. SES-AMD-20070731-01010 and SES-AMD-20070907-01251.

² The "L-band" is a general designation for frequencies from 1 to 2 GHz. In this Order and Authorization, however, the term "L-band" denotes only the 1545-1559 MHz and 1646.5-1660.5 MHz frequency band ("upper L-band") and the 1525-1544 MHz and 1626.5-1645.5 MHz frequency bands ("lower L-band"). The United States is the only country that distinguishes between the "upper" and "lower" L-band.

³ The MSAT-1 satellite is licensed by Canada.

⁴ MSAT-2 is a U.S.-licensed satellite and is also known as AMSC-1.

⁵ 47 C.F.R. § 25.136(d), 47 C.F.R. § 2.106, Footnotes US308, US315.

⁶ A "half-duplex" MET is one that cannot receive and transmit data messages simultaneously. It must finish transmitting before it can receive an incoming message. In re OuterLink, Inc., 17 FCC Rcd 12757, n.3 (Int'l Bur., Sat. Div. 2002).

⁷ IBFS File No. SES-LIC-19990216-00488 granted on January 18, 2001.

⁸ *Public Notice*, Report No. SES-00939 (released June 27, 2007).

operate within the 1530-1544 MHz and 1631.5-1645.5 MHz portions of the lower L-Band and to add the 1558.5-1559 and 1660-1660.5 MHz portions of the upper L-Band. Comtech filed amendments to this application on July 31, 2007⁹ and on September 7, 2007.¹⁰ The modification and associated amendments were placed on Public Notice on June 27, 2007, August 8, 2007, and September 12, 2007. No comments were filed to either the modification or amendments. Comtech filed supplemental information in a letter dated October 3, 2008.¹¹ Comtech is presently operating pursuant to special temporary authority under the parameters requested in this modification application, as amended.¹²

III. DISCUSSION

3. We conclude that, subject to conditions, grant of the modification and accompanying waiver requests sought by Comtech will serve the public interest. Grant of Comtech's request will permit it to continue to provide valuable services, including real-time messaging and location and logistics tracking capabilities.

4. Comtech seeks a waiver of the Commission rules concerning minimum capabilities of L-Band MSS, specifically capabilities that provide for priority access and real-time preemption consistent with Footnotes US308 and US315 to the Table of Allocations¹³ and Section 25.136(d) of the Commission's rules.¹⁴ Section 1.3 of the Commission's rules authorizes the Commission to waive its rules for "good cause shown."¹⁵ Waiver is appropriate only if special circumstances warrant a deviation from the general rule and such deviation would better serve the public interest than would strict adherence to the general rule.¹⁶ Generally, the Commission may grant a waiver of its rules in a particular case only if the relief requested would not undermine the policy objective of the rule in question and would

⁹ *Public Notice*, Report No. SES-00952 (released August 8, 2007).

¹⁰ Satellite Communications Services, Satellite Radio Applications Accepted for Filing, *Public Notice*, Report No. SES-00962 (released September 12, 2007).

¹¹ See also Letter from Joan M. Griffin, Attorney, Comtech Mobile Datacom Corporation, to Marlene H. Dortch, dated October 3, 2008 (Comtech October 3, 2008 Letter).

¹² Comtech Mobile Datacom Corp., STA Renewal/Extension Request, SES-STA-20081216-01618, Grant Stamp with conditions (February 4, 2009).

¹³ 47 C.F.R. § 25.136(d), 47 C.F.R. § 2.106, Footnotes US 308, US315. Footnote US308 to Section 2.106 states: "In the frequency bands 1549.5–1558.5 MHz and 1651–1660 MHz, the Aeronautical-Mobile-Satellite [R] Service (AMS[R]S) requirements that cannot be accommodated in the 1545–1549.5 MHz, 1558.5–1559 MHz, 1646.5–1651 MHz and 1660–1660.5 MHz bands shall have priority access with real-time preemptive capability for communications in the mobile satellite service. Systems not interoperable with the aeronautical mobile-satellite [R] service shall operate on a secondary basis. Account shall be taken of the priority of safety-related communications in the mobile-satellite service." Footnote US315 to Section 2.106 states; "In the frequency bands 1530-1544 MHz and 1626.5-1645.5 MHz maritime mobile satellite distress and safety communications, e.g., GMDSS, shall have priority access with real-time preemptive capability in the mobile-satellite service. Communications of mobile satellite system stations not participating in the GMDSS shall operate on a secondary basis to distress and safety communications of stations operating in the GMDSS. Account shall be taken of the priority of safety-related communications in the mobile satellite service." Footnotes US308 and US 315 thus involve similar substantive provisions, focusing, for US308, upon upper L-Band and aeronautical safety communications, and, for US315, upon lower L-Band and maritime safety communications.

¹⁴ 47 C.F.R. § 25.136(d). Section 25.136(d) of the Commission's rules lists a set of eight capabilities that mobile earth stations operating in portions of the lower L-band (1530-1544 MHz and 1626.5-1645.5 MHz frequency bands) must have so as to satisfy priority and real time preemption requirements.

¹⁵ See Section 1.3 of the Commission's rules, 47 C.F.R. §1.3. See also *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969) (*WAIT Radio*); *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1166 (D.C. Cir. 1990) (*Northeast Cellular*).

¹⁶ See *Northeast Cellular*, 897 F.2d at 1166.

otherwise serve the public interest.¹⁷

5. The Commission has determined that full compliance with Footnote US315 is not possible for half-duplex METs, because a transmission from such METs cannot be interrupted once it has started.¹⁸ The National Telecommunications and Information Administration (NTIA) has indicated to the Commission that if a MET is capable of, among other things, ceasing transmissions within one second, the terminals would meet the Footnote US315 requirements.¹⁹ NTIA, however, has not objected to operation of METs that take longer than 1 second to shut off if the METs operate on dedicated channels, provided that the authorization is for a limited term of two years.²⁰ Because half-duplex transmissions are most often of very short duration, operations of half-duplex terminals have often been considered consistent with the spirit although not the letter of the real-time preemption requirement.²¹

6. In its instant application,²² Comtech explains that its half-duplex METs operate on dedicated channels that are not used for maritime distress or aviation safety services, and do not operate on frequencies on which transceivers designed for such purposes operate. Comtech indicates that the majority of its MET operations would meet the one-second criteria, but that operations in Alaska and Hawaii are at lower data rates, in order to ensure communications with reliability comparable to the reliability of communications in the lower 48 states, and thus may exceed the one-second criteria. Comtech also indicates that a very small number of terminals are designed such that the shutdown time of a MET is up to 2.4 seconds when operating in the lower 48 states, and up to 3.6 seconds for operations in Alaska and Hawaii.²³ Comtech provides an analysis of its MET operations in the United States over an eight month period, showing that an average of only 2900 packets per month had a transmission duration of 1 second or longer, representing approximately 94 instances per day in which transmission exceeded a 1 second duration.²⁴

7. We find that Comtech's half-duplex terminals will not adversely affect current aeronautical and maritime safety operations in the L-Band, because Comtech operates on dedicated channels, and because of the limited extent and number of the operations that do not meet the one-second criteria. Under these circumstances, requiring Comtech to terminate those limited operations that do not meet the one-second criteria, or to employ an alternative (and more expensive) full-duplex system for those

¹⁷ See *WAIT Radio*, 418 F.2d at 1157.

¹⁸ See Establishing Rules and Policies for the Use of Spectrum for Mobile Satellite Service in the Upper and Lower L-band, *Report and Order*, IB Docket No. 96-132, 17 FCC Rcd 2704, 2717 (para. 30) (2002) (*L-band Policy and Rules R&O*). In that *Order*, the Commission codified the provisions of Footnotes US315 and 5.353A in Section 25.136(d) of the Commission's rules. See *L-band Policy and Rules R&O*, Appendix A, Section 25.136(d).

¹⁹ See *L-band Policy and Rules R&O*, 17 FCC Rcd at 2721-22 (para. 41).

²⁰ See *Richtec Incorporated*, 18 FCC Rcd 3295, 3299 (para. 11)(Int'l Bur., Sat. Div. 2003). See also *L-band Policy and Rules R&O*, 17 FCC Rcd at 2720 (para. 37).

²¹ *L-band Policy and Rules R&O*, 17 FCC Rcd at 2717 n.65, citing Application of AMSC Subsidiary Corporation for Modification of its Blanket License to Construct and Operate 30,000 L-Band Mobile Earth Stations, *Order and Authorization*, 10 FCC Rcd 10458 (Int'l. Bur., 1995); Application of Rockwell International Corporation for Modification of its Blanket License to Construct and Operate 30,000 L-Band Mobile Earth Stations, *Order and Authorization*, 10 FCC Rcd 10952 (Int'l. Bur. 1995).

²² Comtech Application, Schedule B, Exhibit B at 2-4.

²³ Comtech Application, Schedule B, Exhibit B at 4-5. See also Comtech October 3, 2008 Letter, indicating that only 900 of Comtech's METs have the maximum shutdown time of 3.6 seconds, and only 10 of these METs are operating on any given day.

²⁴ Comtech Application, Schedule B, Exhibit B at 5. Comtech further states that "For all of [its] U.S. traffic, the 1-second transmission duration is exceeded on average only . . . 0.1% of the day." Comtech October 3, 2008 Letter at 3.

operations, or to employ a full-duplex system for all of the systems because of the limited noncompliance of a few stations on a few occasions, would impose an undue economic burden in light of the absence of harm in this case. We also note that the NTIA has raised no objection on behalf of the potentially affected federal agencies.. Accordingly, we will waive the requirements of Footnotes US308, US315 and Section 25.136(d) for a term that will end on January 18, 2011.²⁵ If Comtech requires an authorization to operate beyond the period granted it must file a new modification application to extend the date rather than file a renewal of the license. In such an application, Comtech must again seek waiver of Footnotes US308 and US315 to the Table of Allocations and Section 25.136(d) of the Commission's rules,²⁶ and must submit an analysis of its MET operations in the United States showing the number of packets each month having a transmission duration of 1 second or longer since the release of this authorization.

IV. ORDERING CLAUSES

8. Accordingly, IT IS ORDERED that, the application of Comtech Mobile Datacom Corporation to modify its Earth Station authorization, E990143, as amended and supplemented, is GRANTED and Comtech Mobile Datacom Corporation IS AUTHORIZED to include new types of METs within its authorized 25,000 METs on a non-common carrier basis in the 1631.5-1645.5 MHz, 1646.5-1660.5 MHz, 1530-1544 MHz, and 1545-1559 MHz frequency bands using the MSAT-1 satellite at 106.5° W.L. and the MSAT-2 satellite at 100.95° W.L. to provide mobile satellite service in the United States, in accordance with the technical specifications set forth in its application and its Radio Station Authorization, and consistent with the Commission's rules, subject to the conditions set forth below:

a. Comtech Mobile Datacom Corporation must comply with the out-of-band emission limits for mobile earth terminals set forth in 47 C.F.R. § 25.216.

b. Comtech Mobile Datacom Corporation's authorization as modified is limited to a term ending January 18, 2011, or until either the MSAT-1 or MSAT-2 satellite ceases operation. If Comtech wishes to continue to operate beyond January 18, 2011 it must file a new modification application, and in that application must justify its need to continue to operate under a waiver of Footnotes US308 and US315 to the Table of Frequency Allocations, Section 2.106 and Section 25.136(d) of the Commission's rules, 47 C.F.R. §§ 2.106, Footnotes US308, US315, 25.136(d), and must submit an analysis of its MET operations in the United States showing the number of packets each month having a transmission duration of 1 second or longer since the release of this authorization.

9. IT IS FURTHER ORDERED that, Comtech Mobile Datacom Corporation is GRANTED a waiver of the priority access and real-time preemption requirements of Footnotes US308 and US315 to Section 2.106, and Section 25.136(d) of the Commission's rules, 47 C.F.R. §§ 2.106, Footnotes US308, US315, 25.136(d), for the term of the license.

10. IT IS FURTHER ORDERED that, Comtech Mobile Datacom Corporation's MET operations shall be limited to spectrum in each direction of the 1631.5-1645.5 MHz, 1646.5-1660.5 MHz, 1530-1544 MHz, and 1545-1559 MHz frequency bands coordinated for the satellite(s) being accessed in the most recent annual L-band operator-to-operator agreement.

11. IT IS FURTHER ORDERED that, in the absence of a continuing annual L-band operator-to-operator coordination agreement, operations of METs in the 1525-1559 and 1626.5-1660.5 MHz bands will be on a non-interference basis until a future operator-to-operator agreement is concluded.

²⁵ See *L-band Policy and Rules R&O*, 17 FCC Rcd at 2720 (para. 37). This date also corresponds to the expiration date for Comtech's current authorization.

²⁶ 47 C.F.R. § 2.106, Footnotes US308, US315; 47 C.F.R. § 25.136(d).

12. IT IS FURTHER ORDERED that Comtech Mobile Datacom Corporation's operation of its 25,000 METs is on a secondary basis to safety and distress communications of any stations operating in the Aeronautical Mobile [R] Service and/or the Global Maritime Distress Satellite Service.

13. IT IS FURTHER ORDERED that, Comtech Mobile Datacom Corporation be afforded thirty days to decline this authorization. Failure to respond within this period will constitute formal acceptance of the authorization.

14. This Order is issued pursuant to Sections 0.241 and 0.261 of the Commission's rules on delegated authority, 47 C.F.R. §§ 0.241, 0.261, and is effective upon release. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of the public notice indicating that these actions were taken.

FEDERAL COMMUNICATIONS COMMISSION

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